

Date: Wednesday, 3/8/2006 10:37:45 AM  
 User: Kim Johnston

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: SHROUD ASSEMBLY
Job Number	: 26106		
Estimate Number	: 12221		
P.O. Number	:	Part Number	: D34671
This Issue	: 3/8/2006	S.O. No. :	Drawing Number : D3467 REV.A
Prsht Rev.	: NC		Project Number : N/A
First Issue	: / /	Type : PURCHASED PARTS	Drawing Revision : A
Previous Run	:	Material	:
Written By	:	Due Date	: 3/31/2006
Checked & Approved By	:	Qty:	12 Um: Each
Comment	: est rev. A 06.02.06 new issue EC		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description:
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1.0	OUTSIDE SERVICE	OUTSIDE SERVICES
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Comment: Sub-Contracting Issue P/O: 06000768  
 Email or Ship DXF file to vendor  
 Laser Cut per Dwg D3467 flat pattern D3467-1F  
 Material release note required

06/03/09

2.0	D34671F	COVER PLATE FLAT PATTERN
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Comment: Qty.: 1.0000 Each(s)/Unit Total: 12.0000 Each(s)  
 DOUBLER FLAT PATTERN

3.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1  
 Receive & Inspect For Transit Damage  
 Ensure material certification is attached

12 02-06-21 (20)

4.0	QC6	DIMENSIONAL CHECK
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Comment: DIMENSIONAL CHECK

12 02-06-22

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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Comment: SMALL & MEDIUM FAB RESOURCE 1  
 1-Deburr

2-Form as per dwg D3467

SB 06/03/24

W/O:			WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
		Mold pattern Incorrect	ASD/12	Prototype Destroy	VB 0603-27	VB 0603-27	VB 0603-27	VB 0603-27

NOTE: Date & initial all entries

Date: Wednesday, 3/8/2006 10:37:46 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHROUD ASSEMBLY

Job Number: 26106

Part Number: D34671

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

7.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

8.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

Job Completion



W/O:			WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE				By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

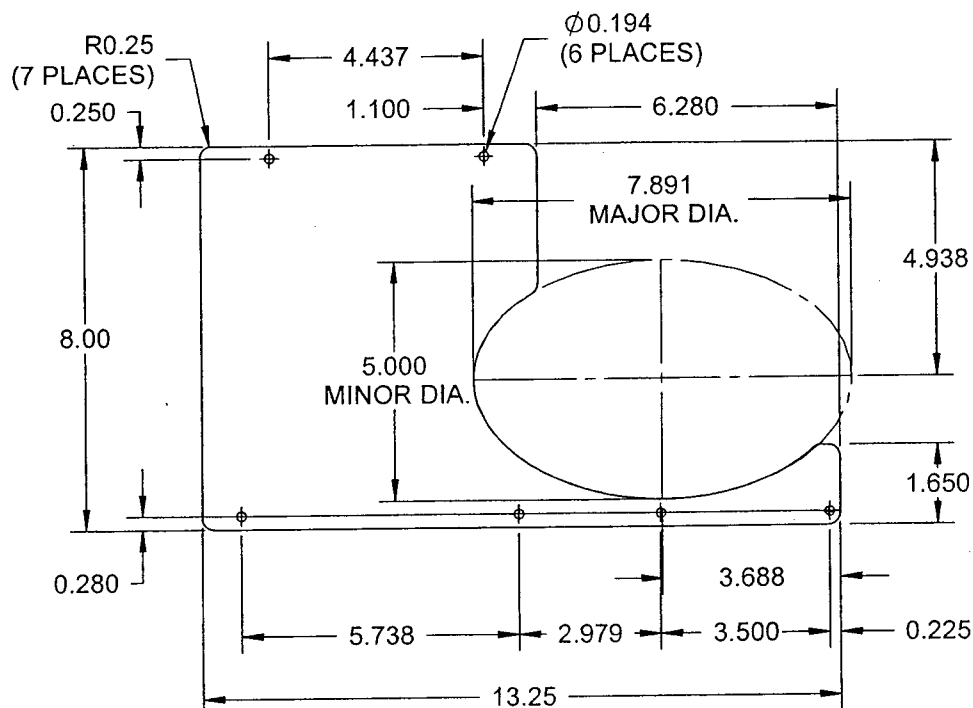
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

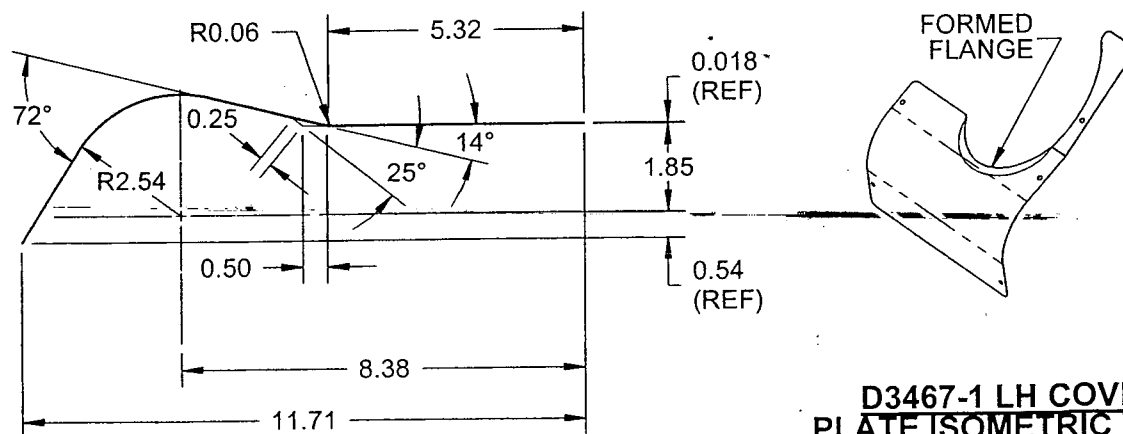
NOTE: Date & initial all entries

PRELIMINARY ISSUE

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D3467	REV. A SHEET 6 OF 15
DATE 05.12.07		TITLE SHROUD ASSEMBLY	SCALE 1:4



**D3467-1F COVER PLATE FLAT PATTERN**



**D3467-1 LH COVER PLATE  
D3467-2 RH COVER PLATE (OPPOSITE)**

**D3467-1 LH COVER  
PLATE ISOMETRIC VIEW,  
D3467-2 RH COVER  
PLATE (OPPOSITE)  
SCALE 1:8**

**NOTES:**

- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5019 (ANNEALED) 2B FINISH  
26 GAUGE SS (0.018 THICK)  
(REF. DART SPEC. M304S26GA)
- 2) FINISH: ELECTRO CHEMICALLY POLISH
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

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3/17/06

604-946-453 ATTN: PETE

03/17/2006 14:36 FAX 604 946 4153  
03/17/2006 14:18 FAX 604 2729137INDUSTRIAL LASER CUTTING  
INTEGRIS METALS002  
001/004

3/17/2006 1:57 PAGE 001/002 Fax Server


F-597

T-726 P.007/015


263-288-3888

FROM-INTEGRIS

MAY-17-2005 18:05

		<b>AK Steel Corporation</b> <b>Metallurgical Test Report</b> <b>Coshocton Works</b> <b>Coshocton, OH 43812</b>		Page 1												
				Lead No. 7410672 BRN No. 7410672												
INTEGRIS METALS PO BOX 340 MINNEAPOLIS, MN 55440	INTEGRIS METALS 306 B STREET AUBURN, WA 98001	MILL ORDER NO. 772185-0191 PART NO. 74251497		PROCESSOR ORDER NO. 427135-01 BUYER'S ORDER NO. 427135-01												
		EXHAUSTION - PRODUCT - METRIC UNITS J175001 48.000 X COIL														
SKID ID	PIECE	HEAT	PARENT COIL ID	NET WEIGHT												
SKD713143	1	7250151	0540919-01	8,445 LBS. 4012 KG.												
SKD713144	1	7250151	0540919-01	8,470 LBS. 4013 KG.												
SKD713145	1	7250151	0540919-01	8,325 LBS. 4008 KG.												
SKD713149	1	7250151	0540919-01	8,441 LBS. 3991 KG.												
TOTAL SKIDS	TOTAL PIECES			TOTAL NET WEIGHT												
4	4			34,681 LBS. 15,075 KG.												
L-Cable Analysis of Heat      P-Product Analysis of Parent Coil <b>CHEMICAL ANALYSIS</b>																
ID	C	MN	P	S	SI	CR	NI	MO	N	CU	CO					
L 7250151	.049	1.39	.027	.001	.35	18.18	8.05	.35	.04	.30	.12					
SHIPPING DATE: 03/13/2005		REMARKS					NO INTENTIONAL ADDITIONS OF MERCURY OR MERCURY COMPOUNDS, RADIUM, ALPHA SOURCE, AND LOW MELTING ALLOYS OR ELEMENTS CAPABLE OF FORMING LOW MELTING ALLOYS WERE MADE THROUGHOUT THE PROCESSING OF THIS MATERIAL.									
<b>PRODUCT DESCRIPTION</b> CR SHOT TYPE 304 STAINLESS #28 FINISH SLIT EDGE * AMS 5813 & ALL TECH REQS HAVE BEEN MET UNLESS MARKED TO OR NOTED OTHERWISE * A SYN A 240 -04 EX PARA 3.1.5 B LONG WILL BE DETERMINED BY ASTM E 8 * ASTM A 490 -01 EX PARA 19.1.1 B LONG WILL BE DETERMINED BY ASTM E 8 EX PARA 20.1.1.3 COIL WILL BE TAPPED ON OUTSIDE ONLY * ASTM A 666 -03 * IN-001 Rev 0, * IN-011 0 * BUYER PART# 74251497 * ASME SA-240 SECTION II PART B (2001 ED. 2002 ADDENDA) EX PARA 3.1.5 B LONG WILL BE DETERMINED BY ASTM E 8 * EN-10204 3.1.5																
PARENT COIL ID	POS (R/T)	DIR (L, T, D)	COND	% LONG 2 INCH MEASURED	TENSILE STRENGTH (KSI)	YS. 2% OFFSET (KSI)	ROCKWELL HARDNESS T <sub>01</sub>	ROCKWELL HARDNESS F <sub>01</sub>								
0540919-01	T	T	ASTM A 490	1.0	85.2	37.1	72	74								

\*\*\* CONTINUED ON NEXT PAGE \*\*\*

		<b>AK Steel Corporation</b> <b>Metallurgical Test Report</b> <b>Coshocton Works</b> <b>Coshocton, OH 43812</b>		Page 2 Lot# No. 7410672 SRN No. 7410672							
		INTEGRIS METALS PO BOX 360 MINNEAPOLIS, MN 55440		INTEGRIS METALS 306 "B" STREET AUBURN, WA 98001							
C S T R U C T I O N	MILL ORDER NO. 272345-0191 PROCESSOR ORDER NO. 427136-01 BUYERS ORDER NO. 427136-01		PART NO. 74231407 ENGLISH UNITS - PRODUCT - METRIC UNITS .9175 NOM 484000 X COIL								
PARENT COIL ID	POS (F/T)	DIR (L, T, D)	COND	ASTM A 763 FRACTURE	BEND 180 IT						
0549919-02	T		ASTM	PASS	PASS						
PARENT COIL ID	POS (F/T)	DIR (L, T, D)	COND	%ELONG 2 INCH MEASURED	TENSILE STRENGTH (KSI)	Y.S. 3% OFFSET (KSI)	ROCKWELL HARDNESS Tail	ROCKWELL HARDNESS Front			
0549919-02	F	T	ASTM	71.0	92.8	33.1	B 72	B 74			
PARENT COIL ID	POS (F/T)	DIR (L, T, D)	COND	BEND 180 IT							
0549919-02	F		ASTM	PASS							
<p>THE CHEMICAL ANALYSIS AND TYPICAL OR MECHANICAL TESTS REPORTED ABOVE ARE CORRECT AS CONTAINED IN THE RECORDS OF THIS CORPORATION.</p> <p>ALL TESTING IS DONE IN ACCORDANCE WITH AISC M STANDARDS UNLESS OTHERWISE NOTED.</p> <p>AK Steel Corporation MAY060049 8/03</p> <p>SIGNED <i>Steve Kagan</i> DATE 05/19/2005 TIME 19:01 PM APPLICATION ENGINEER</p>											

## MATERIAL TEST REPORT

From: NORTH AMERICAN STAINLESS CANADA, IN  
740 IMPERIAL ROAD NORTH

Page : 1  
Heat/Lot : 86K9  
TIN : B42748

Sold To: INTEGRIS METALS, LTD.  
7910 40TH STREET SE  
CALGARY, AB T2C2Y3

Ship To: \*\*\*CUSTOMER PICKUP\*\*\*  
4375 14TH STREET NORTHEAST  
CALGARY  
ABT3K7A9

### Vendor Information

Cust PO #: 416824

Chat PO DT: 11/03/05

### Specifications

STAINLESS STEEL SHEET, COLD ROLLED, ANNEALED AND PICKLED.  
ASTMA240/04a 480/04a, 666/03, ASMESA240/04-A05, 480/04-A05, SA666/04  
Q08766D-A X 1/8 PRM, AMS5513H X MRK&FIN, MIL5059D, AMD3, X CRWN MEAS  
CORROSION: ASTM A262/02aE; 180Bend-OK  
Buyer Part: 4288441  
304 2B .1305 IN 48 IN 96 IN  
Country of Origin: UNITED STATES

### Mechanical Tests

		UOM	L	O		UOM	L	O
Yield Strength - 0.2% Offset	40	KSI	F	TRANSV				
Tensile Strength (UTS)	93.3	KSI	F	TRANSV				
Rockwell B	85		F	TRANSV				
Pct Uniform Elong 2 In/50mm	57.01	PCT	F	TRANSV				
Rockwell A	85		T	TRANSV				

### Chemical Composition

C Carbon-Fct	.059	CR Chromium-Pct	18.360
CU Copper-Fct	.342	MN Manganese-Pct	1.643
MO Molybdenum-Pct	.285	N Nitrogen-Pct	.037
NI Nickel-Fct	8.150	P Phosphorus-Pct	.029
SI Silicon-Fct	.289		

### Comments



# MATERIAL TEST REPORT

From: NORTH AMERICAN STAINLESS CANADA, IN  
740 IMPERIAL ROAD NORTH

Page : 2  
Heat/Lot : 86K8  
TIN : B42748

Material free from mercury contamination. No weld repairs.  
EN 10204 3.1 PED 97/23/EC Annex1, Para. 4.3 Q08763F Cond A  
This document certifies the material has been tested in  
accordance with applicable specifications described herein  
and has met those requirements.

QA by ERIC HESS 02/01/2006

## Miscellaneous Data

GUKLPH , ORN: K123  
Control #: S0C60214  
Part #: 74271441  
.135 X .48 X .96

Date: 03/17/06

SOLD TO: INDA LAFER

TO 110880

S/O 90-374786 - 02

*[Signature]* 3/17/06

The Chemical Analysis and Mechanical Test  
data was received via EDI from the above  
mentioned vendor.

INTEGRIS METALS, LTD.

0004/004  
0002

INTEGRIS METALS

03/17/2006 14:18 FAX 6042729137  
04/20/2015 08:27 FAX